

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 7,232,569 B2  
APPLICATION NO. : 10/813908  
DATED : June 19, 2007  
INVENTOR(S) : Frey et al.

Page 1 of 15

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page, Item (63)

In the "Related U.S. Application Data" heading on the face page of the patent:

"Continuation of application No. 10/416,902, filed as application No. PCT/CA2001/01589 on Nov. 15, 2001" should be replaced with --Continuation of application No. 10/416,902, filed on May 15, 2003, which is a 371 of application No. PCT/CA2001/01589 filed on Nov. 15, 2001.--

At Column 13, Line 7, "AcrY" should be replaced with --AcrV--;

At Column 13, Line 33, "linus" should be replaced with --time a--;

At Column 13, Line 42, "gliatlenged" should be replaced with --challenged--;

At Column 13, Line 45, "det&nuined" should be replaced with --determined--;

At Column 18, in Table 2, "GCCCGTTTTGCCTATCAA" should be replaced with --GCCCGTTTTGCCTATCAA (SEQ ID NO:16)--;

At Column 18, in Table 2, "GCGCCGATATCGGTACCC" should be replaced with --GCGCCGATATCGGTACCC (SEQ ID NO:17)--;

At Column 18, in Table 2, "TTCGTCGGCTGGCTTGATGT" should be replaced with --TTCGTCGGCTGGCTTGATGT (SEQ ID NO:18)--;

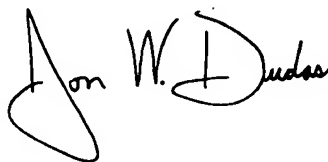
At Column 18, in Table 2, "GAACTCGCCCCCTTCCATAA" should be replaced with --GAACTCGCCCCCTTCCATAA (SEQ ID NO:19)--;

In the Sequence Listing:

Please replace the Sequence Listing with the Substitute Sequence Listing submitted herewith Col. 19 - Col. 34.

Signed and Sealed this

Thirteenth Day of January, 2009



JON W. DUDAS  
Director of the United States Patent and Trademark Office

SEQ LISTING\_ST25.txt  
SEQUENCE LISTING

<110> Frey, Joachim  
Stuber, Katja  
Thornton, Julian C  
Kuzyk, Michael A  
Burian, Jan

<120> TYPE III SECRETION PATHWAY IN AEROMONAS SALMONICIDA, AND USES THEREFOR

<130> VA/H-50095

<140> US 10/813,908

<141> 2004-03-26

<150> US 10/416,902

<151> 2003-05-15

<150> PCT/CA01/01589

<151> 2001-11-15

<150> US 60/248,864

<151> 2000-11-15

<160> 19

<170> PatentIn version 3.5

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<211> 47

<212> PRT

<213> Aeromonas salmonicida

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<211> 123

<212> PRT

<213> Aeromonas salmonicida

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1 5 10 15

Ile Thr Ile Gly Asp Asn Pro His Ser Leu Ile Gln Leu Glu Leu Glu  
20 25 30

## SEQ LISTING\_ST25.txt

Gln Ser Gly Thr Leu Gln Leu Glu Arg His Gln Gly Gln Leu Thr Leu  
 35 40 45

Trp Leu Ala Arg Ala Val Pro Trp His Gln Ser Gly Glu Ala Ile Arg  
 50 55 60

Arg Ala Met Thr Leu Thr Ala Ala Ala Gln Gly Pro Ala Leu Pro Val  
 65 70 75 80

Arg Ser Gly Trp Leu Gly Glu Glu Gln Leu Ile Leu Phe Val Ser Leu  
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Leu Thr Arg Leu Gln Arg Glu Val Leu Ala Ser  
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 20 25 30

Leu Pro Asp Gly Gln Ser Ile Glu Pro His Ile Ser Arg Leu Tyr Pro  
 35 40 45

Glu Arg Leu Ala Asp Arg Val Leu Leu Asp Phe Ala Thr Pro Asp Arg  
 50 55 60

Gly Phe His Asp Leu Leu Arg Pro Val Asp Phe Asn Gln Ala Met Gln  
 65 70 75 80

Gly Leu Arg Ser Val Leu Ala Glu Gly Gln Ser Pro Glu Leu Arg Ala  
 85 90 95

Ala Ala Ala Leu Leu Glu Gln Met His Ala Asp Glu Gln Leu Met Gln  
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Met Thr Leu His Leu Leu His Lys Val  
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## SEQ LISTING\_ST25.txt

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Leu Ala Ala Leu Leu Gln Ile His Pro Asp His Gln Gly Gly Arg Arg  
 35 40 45

Thr Leu Leu Val Ala Leu Leu Lys Gln Gly Glu Gly Glu Ala Ala Leu  
 50 55 60

Ala His Val Asp Gln Leu Met Gln Gln Gly Glu Ala Asp Gly Pro Leu  
 65 70 75 80

Trp Leu Cys Arg Ser Arg Ala Cys Gln Leu Ala Gly Arg Leu Asp Glu  
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Ser Thr His Pro  
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 20 25 30

Leu Pro Leu Pro Pro Val Ala Leu Asp Ile Leu Ile Ala Ile Asn Met  
 35 40 45

Thr Ile Ser Val Val Leu Leu Met Met Ala Val Tyr Ile Asn Ser Pro  
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Leu Gln Phe Ser Ala Phe Pro Ala Val Leu Leu Ile Thr Thr Leu Phe

## SEQ LISTING\_ST25.txt

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Asp Ala Gly Gln Ile Val Tyr Thr Phe Gly Asn Phe Val Val Gly Gly
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Asn Leu Val Val Gly Ile Val Ile Phe Leu Ile Ile Thr Ile Val Gln
      115             120             125
Phe Leu Val Ile Thr Lys Gly Ser Glu Arg Val Ala Glu Val Ser Ala
      130             135             140
Arg Phe Ser Leu Asp Ala Met Pro Gly Lys Gln Met Ser Ile Asp Gly
      145             150             155             160
Asp Met Arg Ala Gly Val Ile Asp Val His Glu Ala Arg Asp Arg Arg
      165             170             175
Gly Val Ile Glu Lys Glu Ser Gln Met Phe Gly Ser Met Asp Gly Ala
      180             185             190
Met Lys Phe Val Lys Gly Asp Ala Ile Ala Gly Leu Ile Ile Ile Phe
      195             200             205
Val Asn Ile Leu Gly Gly Val Thr Ile Gly Val Thr Gln Lys Gly Leu
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Ser Ala Ala Asp Ala Leu Gln Leu Tyr Ser Ile Leu Thr Val Gly Asp
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Gly Met Val Ser Gln Val Pro Ala Leu Leu Ile Ala Ile Thr Ala Gly
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Ile Ile Val Thr Arg Val Ser Ser Glu Glu Ser Ser Asp Leu Gly Thr
      260             265             270
Asp Ile Gly Ala Gln Val Val Ala Gln Pro Lys Ala Leu Leu Ile Gly
      275             280             285
Gly Leu Leu Leu Val Leu Phe Gly Leu Ile Pro Gly Phe Pro Met Ile
      290             295             300
Thr Phe Phe Ala Leu Ser Ala Ile Val Thr Ala Gly Gly Tyr Phe Ile
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## SEQ LISTING\_ST25.txt

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 340 345 350

Lys Pro Gly Ser Lys Pro Arg Gly Lys Leu Gly Glu Lys Glu Glu Phe  
 355 360 365

Ala Met Thr Val Pro Leu Leu Ile Asp Val Asp Ala Ala Leu Gln Ala  
 370 375 380

Glu Leu Glu Ala Ile Ala Leu Asn Asp Glu Leu Val Arg Val Arg Arg  
 385 390 395 400

Ala Leu Tyr Leu Asp Leu Gly Val Pro Phe Pro Gly Ile His Leu Arg  
 405 410 415

Phe Asn Glu Gly Met Gly Pro Gly Glu Tyr Leu Ile Gln Leu Gln Glu  
 420 425 430

Val Pro Val Ala Arg Gly Leu Leu Arg Pro Gly His Gln Leu Val Gln  
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Glu Ser Ala Ser Gln Leu Asp Leu Leu Gly Ile Pro Tyr Glu Glu Gly  
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Ala Pro Leu Leu Pro Gly Gln Pro Thr Leu Trp Val Ala Asn Glu His  
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Gln Glu Arg Leu Glu Lys Ser Arg Leu Ala Thr Leu Thr Thr Asp Gln  
 485 490 495

Val Met Thr Trp His Leu Ser His Val Leu Arg Glu Tyr Ala Glu Asp  
 500 505 510

Phe Ile Gly Ile Gln Glu Thr Arg Tyr Leu Leu Glu Gln Met Glu Gly  
 515 520 525

Ser Tyr Ser Glu Leu Val Lys Glu Ala Gln Arg Ile Ile Pro Leu Gln  
 530 535 540

Arg Met Thr Glu Ile Leu Gln Arg Leu Val Gly Glu Asp Ile Ser Ile  
 545 550 555 560

Arg Asn Met Arg Ala Ile Leu Glu Ala Met Val Glu Trp Gly Gln Lys  
 565 570 575

## SEQ LISTING\_ST25.txt

Glu Lys Asp Val Val Gln Leu Thr Glu Tyr Ile Arg Ser Ser Leu Lys  
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Arg Tyr Ile Cys Tyr Lys Tyr Ala Asn Gly Asn Asn Ile Leu Pro Ala  
595 600 605

Tyr Leu Leu Asp Gln Gln Val Glu Glu Gln Leu Arg Gly Gly Ile Arg  
610 615 620

Gln Thr Ser Ala Gly Ser Tyr Leu Ala Leu Asp Pro Thr Ile Thr Gln  
625 630 635 640

Ser Phe Leu Asp Gln Val Arg His Thr Val Gly Asp Leu Ala Gln Met  
645 650 655

Gln Asn Lys Pro Val Leu Ile Val Ser Met Asp Ile Arg Arg Tyr Val  
660 665 670

Arg Lys Leu Ile Glu Gly Asp Tyr His Ala Leu Pro Val Leu Ser Tyr  
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Leu  
705

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20 25 30

Gly His Phe Leu Tyr Gly Asn Val Asp Val Phe Arg Ser Ser Ser Leu  
35 40 45

Ser Ser Glu Arg Leu Gly Arg Phe Tyr Leu Arg Trp Thr Gly Ala Ser  
50 55 60

Glu Pro Glu Pro Gly Trp Phe Met Leu Ala Thr Glu Gln Val Cys Ser  
65 70 75 80

## SEQ LISTING\_ST25.txt

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20 25 30

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35 40 45

Glu Ala Pro Thr Glu Gln Val Ala Val Ala Glu Gln Glu Leu Leu Ala  
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20 25 30

Lys Leu Thr Glu Leu Val Glu Leu Leu Lys Gly Lys Ile Thr Ile Ser  
35 40 45

Ala Asp Ser Ser Thr Ala Leu Ser Lys Glu Gln Leu Glu Lys Leu Leu  
50 55 60

Ala Ala Tyr Leu Thr Asp Pro Ala Ser Ile Asn Gly Gly Trp Ala Met  
65 70 75 80



## SEQ LISTING\_ST25.txt

Gly Gln Phe Lys Gly Gly Gln Asp Ala Ala Ile Ala Ala Ile Lys Gly  
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 Val Ile Glu Arg Gly Ala Lys Gln Thr Pro Pro Val Thr His Trp Thr  
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 Ile Pro Glu Phe Met Leu Leu Ser Leu Ser Ala Leu Thr Met Glu Arg  
 115 120 125  
 Thr Asp Asp Asp Leu Ile Thr Thr Phe Thr Gly Val Met Met Phe Gln  
 130 135 140  
 Asp Asn Gln Arg Lys Gly Leu Arg Asp Glu Leu Ala Glu Met Thr Ala  
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 Glu Leu Lys Ile Tyr Gly Val Ile Gln Ser Glu Ile Asn Gln Val Leu  
 165 170 175  
 Ser Ala Ala Ser Asn Gln Thr Phe Lys Thr Asn Phe Asn Leu Met Asp  
 180 185 190  
 Tyr Lys Leu Tyr Gly Tyr Glu Ser Leu Ala Lys Phe Met Glu Gly Gly  
 195 200 205  
 Glu Phe Lys Leu Leu Ser Lys Met Phe Ser Asp Glu Gln Val Thr Lys  
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 Ala Gln Gln Asp Phe Thr Asn Ala Lys Asn Glu Leu Glu Asn Val Thr  
 225 230 235 240  
 Ser Thr Ser Leu Asn Pro Lys Ile Gln Ala Glu Ala Lys Thr Asp Tyr  
 245 250 255  
 Glu Arg Lys Lys Ala Ile Phe Glu Glu Ile Val Glu Thr Gln Ile Ile  
 260 265 270  
 Thr Leu Lys Thr Phe Leu Glu Ser Asp Leu Lys Lys Ser Gly Ala Met  
 275 280 285  
 Ser Gly Ile Glu Ala Glu Tyr Lys Tyr Asp Lys Asp Asn Asn Lys Leu  
 290 295 300  
 Gly Asn Phe Ser Thr Ser Val Ser Asp Arg Ser Arg Pro Leu Asn Asp  
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 Leu Val Ser Glu Lys Thr Ala Arg Leu Asn Asp Val Ser Ser Arg Tyr  
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## SEQ LISTING\_ST25.txt

Asn Ala Ala Ile Glu Ala Leu Asn Arg Phe Ile Gln Lys Tyr Asp Ser  
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                   20                  25                  30

Gly Asp Thr Leu Glu Gln Leu Tyr Ala Leu Ala Phe Ser Gln Tyr Gln  
                   35                  40                  45

Ala Gly Lys Trp Glu Asp Ala His Lys Ile Phe Gln Ala Leu Cys Met  
                   50                  55                  60

Leu Asp His Tyr Glu Pro Arg Tyr Phe Leu Gly Leu Gly Ala Cys Arg  
 65                  70                  75                  80

Gln Ala Met Gly Glu Phe Glu Thr Ala Val Gln Ser Tyr Ser Phe Gly  
                   85                  90                  95

Ala Met Leu Asp Leu Lys Asp Pro Arg Phe Pro Phe His Ala Gly Glu  
                   100                  105                  110

Cys Arg Leu Gln Gln Gly Asp Leu Asn Gly Ala Glu Ser Gly Phe His  
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Ser Ala Arg Leu Leu Ala Asp Thr Asp Pro Gln Gln Ala Asp Leu Ala  
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## SEQ LISTING\_ST25.txt

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